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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No. SAS2-PT042
First Inventor Nitta et al.
Title INTERNET ACCESS SYSTEM AND TELEPHONE DIRECTORY
Express Mail Label No. EL659870175US

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original and a duplicate for fee processing)
2. ☒ Applicant claims small entity status.
See 37 CFR 1.27.
3. ☒ Specification [Total Pages]
(preferred arrangement set forth below)
 - Descriptive title of the invention
 - Cross Reference to Related Applications
 - Statement Regarding Fed sponsored R & D
 - Reference to sequence listing, a table, or a computer program listing appendix
 - Background of the Invention
 - Brief Summary of the Invention
 - Brief Description of the Drawings (if filed)
 - Detailed Description
 - Claim(s)
 - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets]
5. Oath or Declaration [Total Pages]
 - a. ☒ Newly executed (original or copy)
 - b. ☐ Copy from a prior application (37 CFR 1.63 (d))
(for continuation/divisional with Box 17 completed)
 - i. ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s)
named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☐ Application Data Sheet. See 37 CFR 1.76

ADDRESS TO:

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Box Patent Application
Washington, DC 20231

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
 - a. ☐ Computer Readable Form (CRF)
 - b. Specification Sequence Listing on:
 - i. ☐ CD-ROM or CD-R (2 copies); or
 - ii ☐ paper
 - c. ☐ Statements verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

9. ☐ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☐ Power of Attorney
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)
15. ☒ Certified Copy of Priority Document(s)
(if foreign priority is claimed)
16. ☐ Other:

17. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: _____ / _____

Prior application information. Examiner _____ Group / Art Unit _____

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

18. CORRESPONDENCE ADDRESS

☐ Customer Number or Bar Code Label or ☐ Correspondence address below
(Insert Customer No. or Attach bar code label here)

Name	Volpe and Koenig, P.C.		
Address			
City	State	Zip Code	
Country	Telephone	Fax	

Name (Print/Type)	Gerald B. Halt, Jr., Esquire	Registration No. (Attorney/Agent)	37,633
Signature			Date 11/15/00

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Volpe and Koenig, P.C. Revision of PTO/SB/17 (08-00)

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**FEE TRANSMITTAL
for FY 2000**

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT (\$) 395.00**Complete if Known**

Application Number	Not Yet Known
Filing Date	Not Yet Known
First Named Inventor	Nitta et al.
Examiner Name	Not Yet Known
Group Art Unit	Not Yet Known
Attorney Docket No.	SAS2-PT042

METHOD OF PAYMENT (check one)

- 1.
- ☐
- The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to.

Deposit
Account
Number

22-0493

Deposit
Account
Name

Volpe and Koenig, P.C.

☒ Charge Any Deficiency or Credit any Overpayment in the Total Fees Associated with this Communication☒ Applicant claims small entity status.
See 37 CFR 1.27

- 2.
- ☒
- Payment Enclosed:**

☒ Check ☐ Credit card ☐ Money Order ☐ Other**FEE CALCULATION****1. BASIC FILING FEE**

Large Entity Small Entity

Fee Fee Fee Fee Fee Description

Code (\$)	Code (\$)	Code (\$)	Code (\$)	Code (\$)	Fee Description	Fee Paid
101	710	201	355		Utility filing fee	355.00
106	320	206	160		Design filing fee	
107	490	207	245		Plant filing fee	
108	710	208	355		Reissue filing fee	
114	150	214	75		Provisional filing fee	

SUBTOTAL (1) (\$) 355.00**2. EXTRA CLAIM FEES**

Total Claims	Extra Claims	Fee from below	Fee Paid
7	0	9.00	0
4	1	40.00	40.00
Multiple Dependent			

**or number previously paid, if greater; For Reissues, see below

Large Entity Small Entity

Fee Fee Fee Fee Fee Description

Code (\$)	Code (\$)	Code (\$)	Code (\$)	Code (\$)	Fee Description	Fee Paid
103	18	203	9		Claims in excess of 20	
102	80	202	40		Independent claims in excess of 3	
104	270	204	135		Multiple dependent claim, if not paid	
109	80	209	40		** Reissue independent claims over original patent	
110	18	210	9		** Reissue claims in excess of 20 and over original patent	

SUBTOTAL (2) (\$) 40.00**FEE CALCULATION (continued)****3. ADDITIONAL FEES**

Large Entity Small Entity

Fee Fee Fee Fee Fee

Code (\$) Code (\$) Code (\$) Code (\$)

Fee Description

Fee Paid

105	130	205	65		Surcharge - late filing fee or oath	
127	50	227	25		Surcharge - late provisional filing fee or cover sheet	
139	130	139	130		Non-English specification	
147	2,520	147	2,520		For filing a request for <i>ex parte</i> reexamination	
112	920*	112	920*		Requesting publication of SIR prior to Examiner action	
113	1,840*	113	1,840*		Requesting publication of SIR after Examiner action	
115	110	215	55		Extension for reply within first month	
116	390	216	195		Extension for reply within second month	
117	890	217	445		Extension for reply within third month	
118	1,390	218	695		Extension for reply within fourth month	
128	1,890	228	945		Extension for reply within fifth month	
119	310	219	155		Notice of Appeal	
120	310	220	155		Filing a brief in support of an appeal	
121	270	221	135		Request for oral hearing	
138	1,510	138	1,510		Petition to institute a public use proceeding	
140	110	240	55		Petition to revive - unavoidable	
141	1,240	241	620		Petition to revive - unintentional	
142	1,240	242	620		Utility issue fee (or reissue)	
143	440	243	220		Design issue fee	
144	600	244	300		Plant issue fee	
122	130	122	130		Petitions to the Commissioner	
123	50	123	50		Petitions related to provisional applications	
126	240	126	240		Submission of Information Disclosure Stmt	
581	40	581	40		Recording each patent assignment per property (times number of properties)	
146	710	246	355		Filing a submission after final rejection (37 CFR § 1.129(a))	
149	710	249	355		For each additional invention to be examined (37 CFR § 1.129(b))	
179	710	279	355		Request for Continued Examination (RCE)	
169	900	169	900		Request for expedited examination of a design application	

Other fee (specify) _____

* Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$) 0**SUBMITTED BY**

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Registration No.
(Attorney/Agent)

37,633

Complete (if applicable)

Telephone

215-568-6400

Signature

Date

November 15, 2000

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- 1 -

TITLE OF THE INVENTION

INTERNET ACCESS SYSTEM AND TELEPHONE DIRECTORY

CROSS-REFERENCE TO RELATED APPLICATIONS

5 This application is based upon and claims the
benefit of priority from the prior Japanese Patent
Application No. 2000-307874, filed October 6, 2000, the
entire contents of which are incorporated herein by
reference.

BACKGROUND OF THE INVENTION

10 The present invention relates to a convenient
Internet access system and a convenient telephone
directory.

In the prior art, home pages or mail addresses on
the Internet domain are accessed by inputting Internet
15 domain access addresses, or URL (Uniform Resource
Locator) addresses, which comprise complex English
string code sequences.

When one accesses an information apparatus, a
communication apparatus or an information terminal of
20 some company or some party at the other end using the
URL address, he/she has to know the domain (URL) name.
Even if a directory search engine is used, it is
inconvenient to find the domain name unless the genre
to which a party at the other end belongs. If one
25 wishes to access a party at the other end on the basis
of some particle, etc. without an URL, he/she cannot
access it.

BRIEF SUMMARY OF THE INVENTION

The object of the present invention is to provide an Internet access system enabling a user to easily access a specific resource only on the basis of a telephone number, and to provide a telephone directly therefor.

The subject matter of the invention relates to a system for acquiring an Internet domain address by inputting a telephone number, thus accessing an information apparatus, a communication apparatus or an information terminal at the other end.

According to an aspect of the invention, there is provided an Internet access system comprising: an address acquisition section for acquiring a telephone number and identification information produced by adding, to the telephone number, address presence/absence specifying information indicating at least presence/absence of an Internet domain address for identifying a resource on the Internet, and acquiring an Internet domain address associated with the identification information from a database in which at least telephone numbers and Internet domain addresses are associated; and an address transmission section for sending the Internet domain address to a user terminal, and prompting the user terminal to access a resource specified by the Internet domain address.

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According to another aspect of the invention,
there is provided an Internet access system wherein
input data is analyzed to acquire at least one of
correspondency information between a telephone number
5 and an Internet domain address associated with the
telephone number, correspondency information between a
telephone number and attribute information associated
with the telephone number, and correspondency
information between an Internet domain address and
10 attribute information associated with the Internet
domain address.

According to still another aspect of the invention,
there is provided a telephone directory comprising: a
telephone number display section for associatively
15 displaying a telephone number and discrimination
information for discriminating whether there is a URL
address associated with the telephone number.

The invention relating the system is applicable to
a method using this system.

20 The invention relating to the system or the method
is applicable to a computer-readable recording medium
storing a program for enabling a computer to execute a
procedure corresponding to the invention (or a program
for causing a computer to function as means corre-
25 sponding to the invention or causing a computer to
realize a function corresponding to the invention).

Additional objects and advantages of the invention

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will be set forth in the description which follows, and in part will be obvious from the description, or may be learned by practice of the invention. The objects and advantages of the invention may be realized and
5 obtained by means of the instrumentalities and combinations particularly pointed out hereinafter.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING

The accompanying drawings, which are incorporated in and constitute a part of the specification,
10 illustrate presently preferred embodiments of the invention, and together with the general description given above and the detailed description of the preferred embodiments given below, serve to explain the principles of the invention.

15 FIG. 1A and FIG. 1B show whole structures of an Internet access system according to one embodiment of the present invention;

FIG. 2 shows detailed structures of a server and a handheld information terminal according to the
20 embodiment;

FIG. 3 is a flow chart illustrating an Internet access procedure according to the embodiment;

FIG. 4A shows an example of display on an URL address select screen according to the embodiment;

25 FIG. 4B shows an example of an Internet domain address input screen;

FIG. 5 shows an example of a displayed telephone

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number list of a telephone directory in a case of using the Internet access system according to the embodiment; and

FIG. 6 shows an example of the handheld information terminal according to the embodiment.

DETAILED DESCRIPTION OF THE INVENTION

An embodiment of the present invention will now be described with reference to the accompanying drawings.

FIGS. 1A and 1B show whole structures of an Internet access system according to one embodiment of the present invention.

As is shown in FIG. 1A, a server 1, which manages the Internet access system, and a plurality of handheld information terminals 2 are connected to the Internet 3. The connection to the Internet 3 may be in a wired mode or a radio (wireless, optical transmission, etc.) mode.

FIG. 2 shows detailed structures of the server 1 and handheld information terminal 2. As is shown in FIG. 2, the server 1 has an interface 11 for transmission/reception of information with the Internet 3. A telephone number/URL address correspondence analysis program 12, a telephone number search/collection program 13 and an URL address search/collection program 14 are connected to the interface 11. The telephone number/URL address correspondence analysis program 12 functions to analyze an URL address in response to a request from the

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handheld information terminal 2. The telephone number
search/collection program 13 functions to search and
collect a telephone number and attribute information
associated with the telephone number from the terminal,
5 etc. connected to the Internet 3. The URL address
search/collection program 14 functions to search and
collect a URL address and attribute information
associated with the URL address from the terminal, etc.
connected to the Internet 3. The attribute information
10 in this context includes all kinds of attribute
information capable of identifying users of telephone
numbers, such as the names of persons, companies or
organizations, jobs, general concepts of hobbies,
interests, fields of study, etc., as well as categories,
15 addresses, places, or temporal information such as time
and dates.

A telephone number/attribute correspondence
database 16 in which telephone numbers and attribute
information are associated and stored is connected to
20 the telephone number search/collection program 13 and
the telephone number/URL address correspondence
analysis program 12. A telephone number/URL address
correspondence database 15 in which telephone numbers
and URL addresses are associated and stored is
25 connected to the telephone number/URL address
correspondence analysis program 12. A URL address/
attribute correspondence database 17 in which URL

addresses and attribute information are associated and stored is connected to the telephone number/URL address correspondence analysis program 12 and the URL address search/collection program 14.

5 The handheld information terminal 2 comprises an interface 23 for transmission/reception of information with the Internet 3, a terminal database 24, a search/storage program 21 and an information output section 22. The terminal database 24 stores
10 information input by the user, information sent from the server 1, and information processed by the search/storage program 21. The search/storage program 21 is connected to the terminal database 24 and functions to store various information in the terminal
15 database 24 and to request an access, via the Internet 3, to other terminals including the server 1 connected to the Internet 3. The information output section 22 is connected to the search/storage program 21. The information output section 22 displays information sent
20 from the server 1, information input by the user, and various information processed by the search/storage program 21. The information output section 22 may output character information or voice information. Accordingly, voice information or character information
25 may be input to input means (not shown) of the handheld information terminal 2.

Methods of constructing the databases 15 to 17 in

the server 1 will now be described.

To begin with, the method of constructing the telephone number/attribute correspondence database 16 will be described.

5 On the basis of attribute information relating to a given person or company (hereinafter referred to as "to-be-registered party"), the telephone number search/collection program 13 searches countless terminals, etc. connected to the Internet 3 and finds
10 telephone numbers associated with the attribute information. For example, if a search is carried out on the basis of the attribute information of a person A (assuming that the attribute information is the name of person A) using ordinary search engines, WEB (World
15 Wide Web) pages on which the name of person A appears can be extracted. Then, the telephone number of the person A is found from among the extracted WEB pages. A WEB page contains a plurality of character
20 information units. Based on the number of numerals constituting a telephone number, telephone number candidates can be extracted from the character
25 information units. Specifically, if the telephone number comprises 10 numerals, character information units each having 10 successive numerals are extracted. Of course, since there may be character information units including hyphens "-" among numerals indicating telephone numbers, it is preferable to extract such

character information units, too. Moreover, the
telephone number search/collection program 13
determines whether the extracted telephone number
relates to the person A. Where contents of WEB pages,
5 e.g. tags expressed in XML (eXtensible Markup Language)
format, are successively searched, if there is
information indicative of a telephone number and the
name of person A in a tag set, it is determined that
this telephone number identifies person A. Needless to
10 say, the concept of "tag set" includes not only a
single tag indicative of one attribute but also a set
of tags which are separate but indicative one attribute.

The method of constructing the URL address/
attribute correspondence database 17 is basically
15 similar to that of constructing the telephone
number/attribute correspondence database 16, except
that the telephone number is replaced with an URL
address. The database 17 is constructed by the URL
address search/collection program 14. Of course, since
20 the URL address of a WEB page containing attribute
information can be distinguished from other information,
there is no need to perform such a procedure, as
described above, for extracting a telephone number on
the basis of the number of numerals.

25 In the above-described methods of constructing the
telephone number/attribute correspondence database 16
and URL address/attribute correspondence database URL

17, where the search/collection programs 13 and 14 cannot determine whether the attribute information contained in the WEB page relates to the telephone number of URL address of person A but the WEB page contains such a telephone number of URL address, the operator may display the WEB page (not shown) and check the display content. In this case, since the attribute information of person A can be displayed so as to be distinguishable from other information, the operator can easily find the attribute information of person A.

The method of constructing the telephone number/URL address correspondence database 15 will now be described. At least three methods are available in constructing the telephone number/URL address correspondence database 15.

A first method is used where either the URL address or the telephone number of the to-be-registered party is given in advance. Specifically, one of the URL address and the telephone number, which is not given in advance but is to be found, is extracted from countless WEB pages accessible via the Internet 3. This method is substantially the same as the method of constructing the telephone number/attribute correspondence database 16 or URL address/attribute correspondence database 17.

In a second method, common attribute information between the telephone number/attribute correspondence

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database 16 and URL address/attribute correspondence
database 17 is extracted. The telephone number and
URL address associated with the common attribute
information are acquired, and the acquired results are
5 registered in the telephone number/URL address
correspondence database 15.

In a third method, registration is effected by the
input from the user. Specifically, if the user inputs
through the handheld information terminal 2 the
10 telephone number and URL address relating to the to-be-
registered party having some attribute information, the
input information is directly registered in the
telephone number/URL address correspondence database 15.

Where the registration is performed by the third
15 method, the user can request registration with plural
URL addresses associated. For example, the URL address
of the headquarters of some company and the URL address
of a branch office of this company may be associated in
the registration (hereinafter such associatively
20 registered plural URL addresses are referred to as "URL
address set"). In this case, in addition, the
telephone number may be associated in accordance with
the hierarchical order of URL addresses. That is, the
top page of the URL address may be associated with a
25 given page accessible from this top page. For example,
where the URL address "http://www.ir.ct.com" of a
certain top page is associated with the telephone

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number "03-3000-0000" in registration, the URL address
"http://www.ir.ct.com/es" which is lower in order than
the URL address of the top page may be associated with
the telephone number "03-3000-0000-001" which is formed
5 by adding information "001" indicative of a lower-order
URL address to the end of the telephone number
"03-3000-0000".

An Internet access method using the thus
constructed databases 15 to 17 will now be described
10 with reference to a flow chart of FIG. 3.

The user accesses the Internet 3, using the
handheld information terminal 2, and requests access to
the server 1 which manages the Internet access system
of the present invention (s1). Upon receiving the
15 request, the server 1 causes the information output
section 22 of handheld information terminal 2 to
display a telephone number input screen, thus prompting
input of the telephone number (s2). The user inputs
the telephone number relating to, e.g. the desired
20 access, through the displayed input screen. As regards
the method of input, numerical characters may be input
one by one, or the terminal database 24 may be searched
to extract the already registered telephone number.
The thus input telephone number is sent to the server 1
25 (s3). The telephone number/URL address correspondency
analysis program 12 extracts, from the telephone
number/URL address correspondency database 15, the URL

address set consisting of plural URL addresses including the URL address associated with the received telephone number (s4). The URL address select screen including the URL address set is displayed (s5).

5 FIG. 4A shows an example of display on the URL address select screen. The user confirms the display on the information output section 22 of handheld information terminal 2 and selects the desired URL address. The operation for selection may be freely selective. For
10 example, the cursor is moved on the screen displayed on the information output section 22, using the input means (not shown) provided on the handheld information terminal 2, and presses a decision button when the cursor has reached the desired URL address. For
15 example, new registration buttons 41 and 42 may be provided using the URL address select screen, and new registration of a company or a person may be prompted. The information selected by the user is sent to the server 1 (s6). The telephone number/URL address
20 correspondence analysis program 12 extracts the URL address associated with the obtained select information from the database 15, sends the URL address to the handheld information terminal 2 and causes the information output section 2 to display a confirmation
25 screen including this URL address (s7). The confirmation screen may be the same as the URL address select screen shown in FIG. 4A. In this case, a URL

address display section and an access request button
may be provided on the URL address select screen. The
user views the confirmation screen displayed on the
information output section 2 and determines whether
5 the displayed URL address is the desired URL address.
If it is the desired address, an access request
button, for instance, is pressed to output to the
search/storage program 21 URL specifying information
which specifies the determined URL address. The
10 search/storage program 21 requests access to the URL
address specified by the URL specifying information
(s8). With the access request, a desired resource (e.g.
a desired terminal) indicated by the desired URL
address can be accessed.

15 FIG. 5 shows an example of a telephone number
display list of a telephone directory in a case where
the Internet access system with the above structure is
used. Where the system is constructed as described
above, it is easily understood, as is shown in FIG. 5,
20 that a telephone number with identification information
"*" at the top thereof, among telephone numbers listed
in the telephone directory, is not merely a telephone
number for requesting a call, but a telephone number
associated with an URL address. Moreover, the
25 identification information "*" actually indicates an
URL address which can be accessed by inputting the
telephone number with this identification information.

Accordingly, this telephone directory has both the function of a telephone directory listing telephone numbers and the function of a URL address list. As a result, there is no need to prepare a URL address directory in addition to a telephone directory. Of course, for editors of telephone number directories, there is no need to provide a URL address column to the telephone directory, or a list for URL addresses. By adding the identification information "*" to the currently available telephone directory, this telephone directory may be sold as an URL address directory. Needless to say, such a telephone directory may be printed on paper or displayed on information display means such as a CRT of a computer.

As has been described above, according to the embodiment of the invention, the user can access a desired resource (e.g. a desired terminal) without inputting a URL address, which is troublesome and time-consuming. Furthermore, since the already available telephone number is used as the identification information for identifying the party to be called, the identification information for identifying the party to be accessed can be acquired without producing identification information independently in addition to the already available identification information. It should suffice if digital identification information indicating whether there is registration of URL address

is newly added to the already available information.
Even a user who does not know a certain URL address
itself can search for the URL address by the programs
12 to 14 on the basis of attribute information
5 specifying a resource to be accessed, only if he/she
knows such attribute information. Thus, the user can
access the desired resource on the basis of the
attribute information alone. In a case of a terminal
in which software for inputting Chinese characters is
10 not installed, an Internet domain address including a
Chinese character cannot be input. However, according
to the present invention, there arises no problem if
symbol "*" can be input as identification information,
other than numerals or Chinese characters. Thus, it is
15 not necessary that the terminal be equipped with
Chinese character inputting software.

The present invention is not limited to the above
embodiment. In the above embodiment, the server 1 and
handheld information terminal 2 are employed by way of
20 example. However, as shown in FIG. 1B, the handheld
information terminal 2 may be replaced with a desktop
terminal 4. In the above embodiment, the URL address
is used as the Internet domain address. However, it is
possible to use, in addition to the URL address, any
25 resource specifying information (e.g. Internet domain
address) for distinguishing one resource from another,
which is connected to the network.

Where the present invention is applied to the desktop terminal 4, etc. having a keyboard capable of inputting characters by pressing the associated keys which correspond to alphabet and numerals in one-to-one
5 correspondence, it is possible to input characters to an Internet domain address input section (address bar) on a telephone number input screen. In this case, both the ordinary Internet domain address and the telephone number can be input to the Internet domain address
10 input section. Thus, software for distinguishing addresses and telephone numbers is used. FIG. 4B shows an example of the Internet domain address input screen including an address bar 401. This software performs morphological analysis and/or syntactic analysis of
15 characters input to the address bar 401. Preferably, where the input characters begin with "http", they are determined to indicate an Internet domain address. Otherwise, the input characters are determined to indicate a telephone number. Where the Internet domain
20 address has been input, the software may cause the telephone number/URL address correspondence analysis program 12 to extract, from the telephone number/URL address correspondence database 15, the telephone number associated with the input address, and the
25 obtained telephone number may be displayed on the screen. Thereby, the user can easily ask a question or make a complaint by dialing the obtained telephone

number with respect to the resource accessed based on the Internet domain address.

In the case of the desktop terminal 4, it is preferable to input a hyphenated telephone number. For example, telephone number "*0123456789" is input as
5 "*012-345-6789". The telephone number including hyphens "-" is discriminated. However, even whether the terminal employed is the desktop terminal 4 or the handheld information terminal 2, and even whether the
10 telephone number is hyphenated or not, the telephone number should preferably be identified.

The present embodiment is applicable to worldwide telephone numbers. Where the present system is commonly used worldwide, it is possible to add
15 character information, such as alphabet or numerals, to the identification information "*". For example, character information, such as "jpn" for Japan, "usa" for the U.S, or "chn" for China, may be added as country identification information for identifying
20 countries. On the input screen described in connection with step (s2), the input of the telephone number may be prompted and the selection of the country associated with the request for access may also be prompted. In this case, the country associated with the request for
25 access may be selected by selecting image information on national flags displayed on the input screen.

Although FIG. 3 shows the case of separately

inputting and selecting the telephone number, the selection operation may be omitted and the URL address may be sent from the server 1 to the terminal 2 in response to the input of the telephone number. In addition, in the above embodiment, after the telephone number is selected, the URL address is sent and delivered to the information output section 22 of the terminal 2. For example, if the terminal 2 is set such that "http://www." is output on the URL address display section by pressing "*" on the input screen, only the subsequent address may be input and quick access to the desired terminal, etc. is enabled. Besides, the terminal 2 may be set such that "co.jp/" or "co.jp/i/" may be displayed by pressing "#" on the input screen. FIG. 6 shows an example of the handheld information terminal 2 having a "*" button 61 and a "#" button 62. With these settings, the user can access the desired terminal only by inputting "*telephone number#". As a result, the presence of a home page can be emphasized and stressed on the telephone directory, etc. without incurring an excess cost.

In the above embodiment, the URL address and the telephone number for call are distinguished by adding to the telephone number the address presence/absence specifying information "*" indicating that the URL address is associated with the telephone number. Needless to say, this invention is not limited to this

embodiment. Other identification information may be added as the address presence/absence specifying information in place of the above information "*". The server 1 may function not only to provide the above WEB

5 page accessing services, but also to provide line connection services between information terminals in response to call requests. In this case, it is desirable to provide, between the interface 11 of server 1 and the programs 12 to 14, discrimination

10 means for discriminating the telephone number for call request and the telephone number for WEB page access. This discrimination means determines whether the telephone number sent from the information terminal includes URL address presence/absence specifying

15 information "*". If it includes the URL address presence/absence specifying information "*", it is determined that the access to the WEB page is requested, and the access connection service is provided by the operation according to the above-described embodiment.

20 If the telephone number sent from the information terminal does not include URL address presence/absence specifying information "*", it is determined that a telephone call is requested, and the line connection for a call between information terminals is effected.

25 As has been described above in detail, according to the present invention, a resource (e.g. a desired terminal) can easily be accessed without inputting an

Internet domain address, which is troublesome and time-consuming.

Additional advantages and modifications will readily occur to those skilled in the art. Therefore, 5 the invention in its broader aspects is not limited to the specific details and representative embodiments shown and described herein. Accordingly, various modifications may be made without departing from the spirit or scope of the general inventive concept as 10 defined by the appended claims and their equivalents.

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WHAT IS CLAIMED IS:

1. An Internet access system comprising:
an address acquisition section for acquiring an
resource name for identifying a resource on the
Internet associated with identification information
from a database in which at least telephone numbers and
resource names are associated, wherein said
identification information includes telephone number
and address presence/absence specifying information
indicating at least presence/absence of an resource on
the Internet; and

an access prompting section for prompting a user
to access a resource specified by the resource name.

2. An Internet access system according to claim 1,
wherein said database is generated by a search section
for searching resources connected to the Internet,
thereby producing correspondency data between the
telephone number and the resource name.

3. An Internet access system according to claim 1,
wherein said database is generated by searching
resources connected to the Internet and finding, on the
basis of the telephone number and attribute information
associated with the telephone number, the resource name
associated with the attribute information.

4. An Internet access system according to claim 1,
wherein said database is generated by searching
resources connected to the Internet and finding, on the

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basis of the resource name and attribute information associated with the resource name, the telephone number associated with the attribute information.

5. An Internet access system wherein input data
5 is analyzed to acquire at least one of correspondence information between a telephone number and an resource name for identifying a resource on the Internet associated with the telephone number, correspondence information between a telephone number and attribute
10 information associated with the telephone number, and correspondence information between an resource name and attribute information associated with the resource name.

6. An Internet access system comprising:
a first information processing section for
15 analyzing input data, thereby acquiring correspondence information between a telephone number and first attribute information associated with the telephone number;

a second information processing section for
20 analyzing input data, thereby acquiring correspondence information between a resource name for identifying a resource on the Internet and second attribute information associated with the resource name; and

an information registration section for collating
25 the first attribute information acquired by the first information processing section and the second attribute information acquired by the second information

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processing section, and associatively registering,
where both first and second attribute information
coincides, the telephone number and the resource name
which are associated with the first and second
5 attribute information.

7. A telephone directory comprising:

a telephone number display section for
associatively displaying a telephone number and
discrimination information for discriminating whether
10 there is a URL address associated with the telephone
number.

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ABSTRACT OF THE DISCLOSURE

A telephone number sent from a handheld
information terminal and identification information
produced by adding, to the telephone number, address
5 presence/absence specifying information indicating at
least presence/absence of a URL address for identifying
a resource on the Internet are acquired. A URL address
associated with the identification information is
acquired from a telephone number/URL address corre-
10 spondency database in which at least telephone numbers
and Internet domain addresses are associated. A
telephone number/URL address correspondence analysis
program functions to send the URL address to the
handheld information terminal and to prompt the
15 handheld information terminal to access the URL address.

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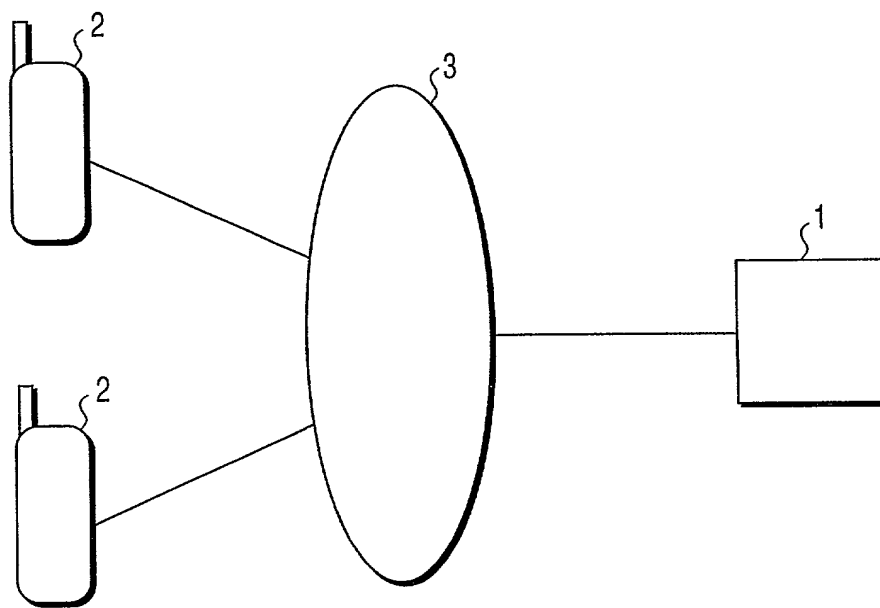


FIG. 1A

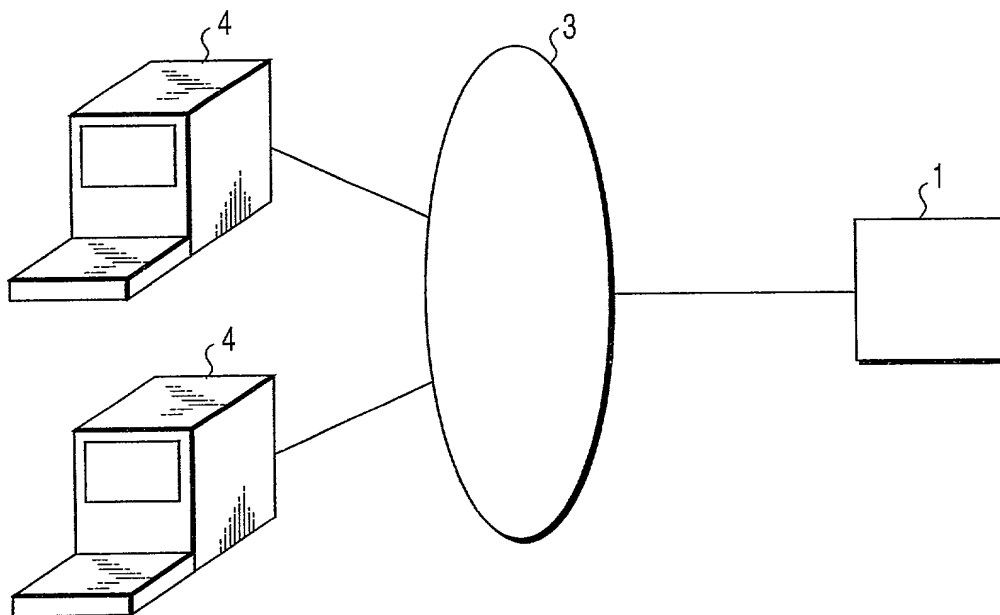


FIG. 1B

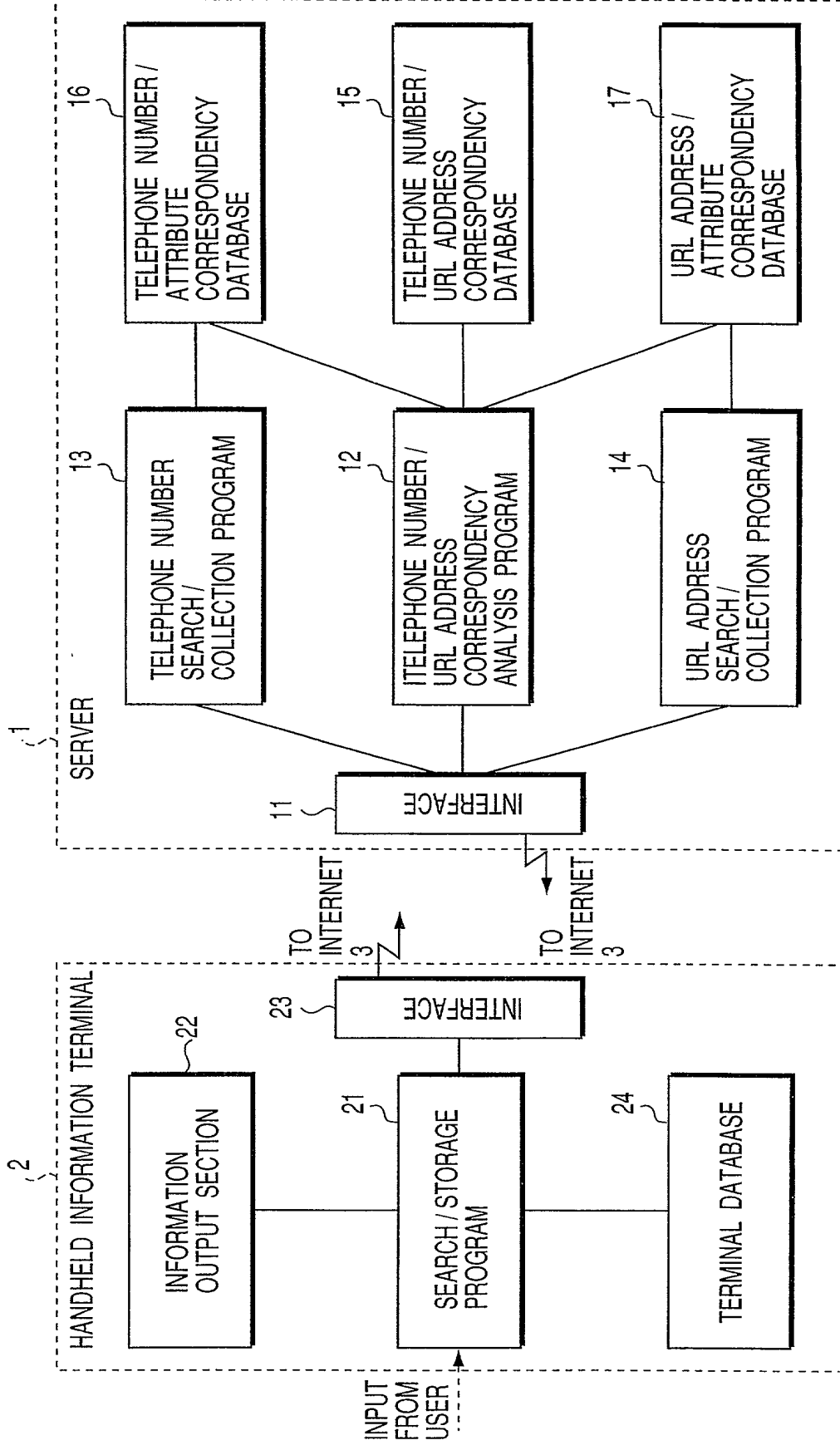


FIG.2

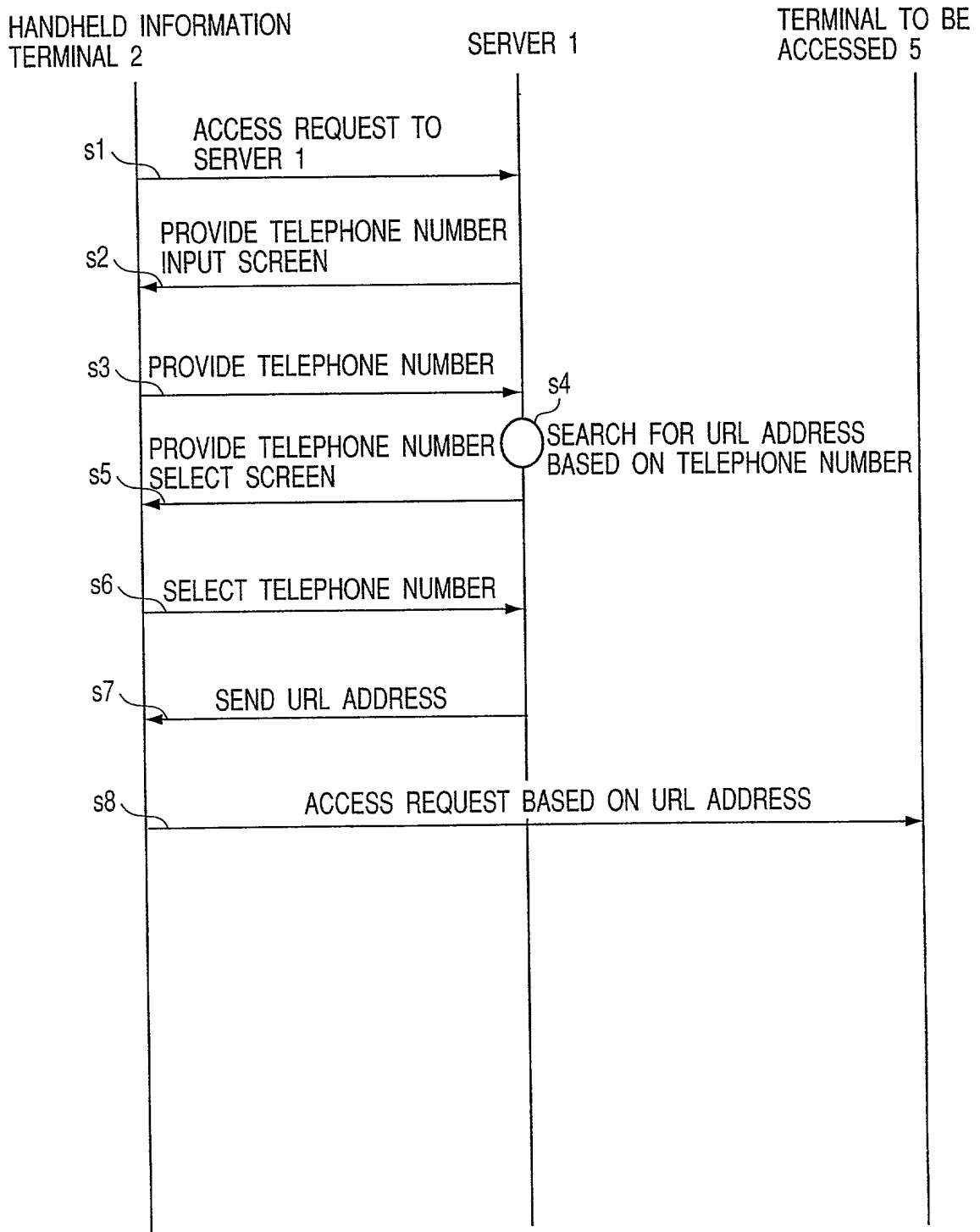


FIG. 3

FIG. 4A

INPUT TELEPHONE NUMBER

SEARCH

● HEAD QUARTERS

NUMBER OF BRANCH

HOME PAGE TO BE ACCESSED

URL

ACCESS

COMPANY NAME

ADDRESS

e-MAIL

NEW REGISTRATION

41 COMPANY

42 PERSON

401

ADDRESS *012-345-6789 ▼

FIG. 4B

NAME	TELEPHONE NO.
YAMADA TARO	* 03-0000-0000
SATO ICHIRO	03-1020-0001
SUZUKI JIRO	01-1223-3245
⋮	⋮
YAMADA CORP.	* 03-4433-1100
YAMADA CORP. (BUSINESS DIVISION)	* 03-4433-1100-001
⋮	⋮
⋮	⋮

FIG. 5

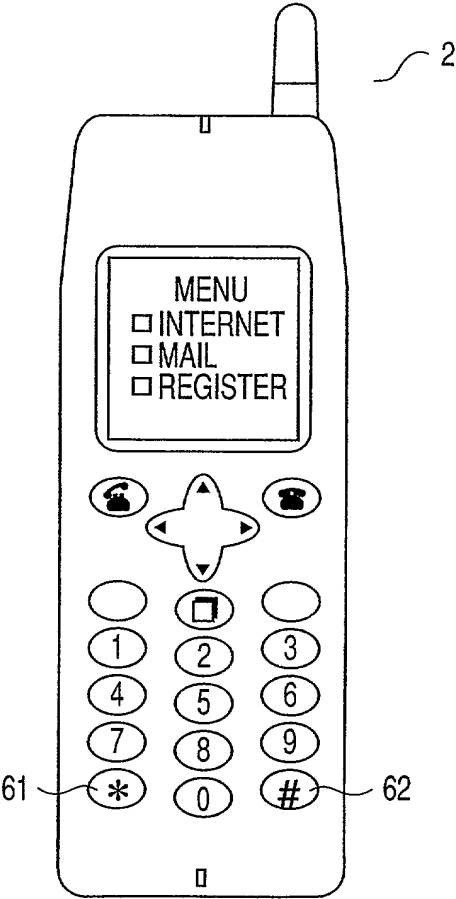


FIG. 6

DECLARATION FOR PATENT APPLICATION

As a below named inventor, I declare:
that I verily believe myself to be the original, first and sole (if only one
individual inventor is listed below) or an original, first and joint inventor
(if more than one individual inventor is listed below) of the invention in

INTERNET ACCESS SYSTEM AND TELEPHONE DIRECTORY

the specification of which is attached hereto unless the following box is
checked.

☐ was filed on _____ as United States Application
or PCT International Application No. _____, and
was amended on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above
identified specification, including the claims, as amended by any amendment
referred to above.

I acknowledge the duty to disclose information of which is material to pat-
entability as defined in 37 CFR 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or 365
(b) of any foreign application(s) for patent or inventor's certificate, or
35 U.S.C. 365(a) of any PCT International application which designated at
least one country other than the United States, listed below and have also
identified below any foreign application for patent or inventor's certifi-
cate, or PCT International application having a filing date before that of the
application on which priority is claimed:

<u>Country</u>	<u>Category</u>	<u>Application No.</u>	<u>Filing Date</u>	<u>Priority Claim</u>
Japan	Patent	2000-307874	October 6, 2000	Yes

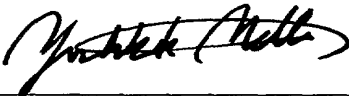

And I hereby appoint Alfred Stapler (Reg.No. 16,675), Anthony S.
Volpe (Reg.No. 28,377), C. Frederick Koenig III (Reg.No. 29,662), Allan H.
Fried (Reg.No. 31,253), Gerald B. Halt, Jr. (Reg.No. 37,633), Timothy J.
Lubecki (Reg.No. 38,953) and Glenn M. Massina (Reg.No. 40,081), each of
whose address is 400 One Penn Center, 1617 John F. Kennedy Boulevard,
Philadelphia, PA 19103, or any one of them, my attorneys with full power
of substitution and revocation, to prosecute this application and to
transact all business in the Patent & Trademark Office connected there-
with, and request that correspondence be directed to Volpe and Koenig,
P.C., 400 One Penn Center, 1617 John F. Kennedy Boulevard, Philadelphia,
PA 19103.

I declare further that all statements made herein of my own knowledge are
true and that all statements made on information and belief are believed to
be true; and further that these statements were made with the knowledge that
willful false statements and the like so made are punishable by fine or im-
prisonment, or both, under Section 1001 of Title 18 of the United States
Code and that such willful false statements may jeopardize the validity of
the application or any patent issued thereon.

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DECLARATION FOR PATENT APPLICATION

I declare further that my citizenship, residence and post office address are as stated below next to my name:

Inventor: (Signature)	Date	Residence and post office address
 Yoshihiko Nitta	Date: November 6, 2000 Citizen of: Japan	4-12-10, Higashirinkan, Sagamihara-shi, Kanagawa-ken, Japan
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	Date: Citizen of: Japan	
	Date: Citizen of: Japan	
	Date: Citizen of: Japan	
	Date: Citizen of: Japan	
	Date: Citizen of: Japan	
	Date: Citizen of: Japan	
	Date: Citizen of: Japan	

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